

A record of Dusky Antechinus *Antechinus swainsonii* from Cape Liptrap Coastal Park, South Gippsland, Victoria

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Abstract

During early May 2009, a survey of mammal fauna was conducted in a section of Cape Liptrap Coastal Park in South Gippsland, Victoria. Several species were recorded including two specimens of the dasyurid marsupial Dusky Antechinus *Antechinus swainsonii*. Numerous surveys of mammals have been conducted in the Cape Liptrap area over several decades; however, no previous records are available for the presence of this species in this reserve or along this section of the Gippsland coast. (*The Victorian Naturalist* 127 (3) 2010, 88-90)

Keywords: Dasyurid marsupial, Cape Liptrap, coastal heathland, coastal distribution.

Introduction

Cape Liptrap Coastal Park covers 4175 hectares, mostly as a coastal strip from Point Smythe, near Venus Bay in the west, to Waratah Bay in the east. However, a fairly large patch made up mostly of Coastal Heathland, extending up to 2.5 km inland, exists near the eastern end of the reserve. This section of the park is located 160 kilometres south-east of Melbourne and is covered by Natmap, 1:100,000, sheet No. 8020 (Wonthaggi). The MGA for the central point of the large patch mentioned above is 115995. The reserve is managed by Parks Victoria.

The survey was commissioned by the Department of Sustainability and Environment, primarily to determine the possible presence of Southern Brown Bandicoot *Isodon obesulus* and the ongoing presence of Swamp Antechinus *Antechinus minimus* and White-footed Dunnart *Sminthopsis leucopus*. The survey was carried out between 4 May 2009 and 9 May 2009.

Methods

Survey methods included cage trapping (standard bandicoot traps, Wiretainers Pty Ltd, Preston, Victoria and R.E. Walters (1899) Pty Ltd, Sunshine, Victoria) and Elliott trapping, type A (Elliott Scientific Equipment, Upwey, Victoria). The survey took place in the large vegetation patch near the eastern end of the park. Five survey sites were chosen in habitat considered typical for each of the target species. Sites were also chosen so as to give the best possible representation of the diverse types of vegetation and fire history within the reserve. A trapping grid with four transects was established at each

site. Each transect had five trapping stations, with one cage trap and one Elliott trap set one to two m apart, at each station. Transects were 25 m apart and trapping stations were 10 m apart. Traps were operated for four nights at each site. Baits for Elliott traps consisted of a mixture of quick oats, smooth peanut butter and honey, with sardines added to the mixture for cage traps. A total of 800 trap-nights were completed, comprising 400 cage trap-nights and 400 Elliott trap-nights.

Results

Six species of mammals were recorded during the survey. Four species were eutherian and two were marsupial. Four species were native and two were introduced (Table 1). No captures of individuals of the three target species occurred at any of the survey sites. Two species of dasyurid marsupials were detected: Agile Antechinus *Antechinus agilis* was recorded at three sites and Dusky Antechinus *Antechinus swainsonii mimetes* was recorded at one site.

Discussion

The Dusky Antechinus is a small, terrestrial, carnivorous marsupial, found over a wide area of south-eastern Australia from southern Queensland to south-west Victoria and western Tasmania (Menkhorst and Knight 2004). In Victoria, two subspecies are recognised: *A. swainsonii insularis* is confined to the Gramscians where it has been recorded recently in a range of wet and dry environments including Montane Rocky Shrubland, Damp Forest, Lowland Forest and Heathy Dry Forest (Homan 2008a; Menkhorst and Homan unpubl. data;

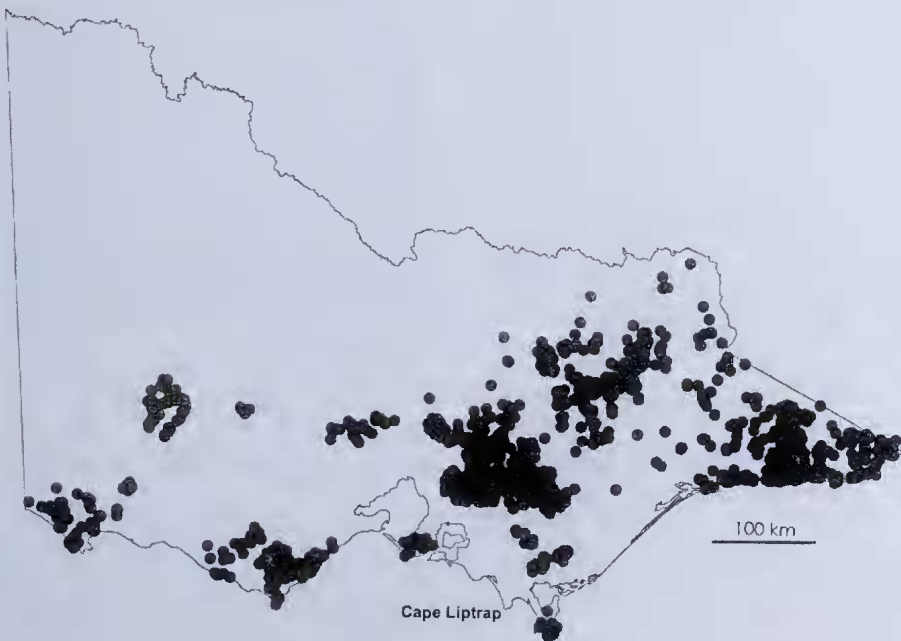
Table 1. List of mammals and numbers recorded. * indicates introduced species.

Common Name	Scientific Name	Number
Agile Antechinus	<i>Antechinus agilis</i>	9
Dusky Antechinus	<i>Antechinus swainsonii mimetes</i>	2
House Mouse	<i>Mus musculus</i> *	14
Swamp Rat	<i>Rattus lutreolus</i>	75
Bush Rat	<i>Rattus fuscipes</i>	58
Black Rat	<i>Rattus rattus</i> *	1

RMIT University unpubl.data). However, *A. s. mimetes*, which occupies the remaining Victorian distribution, is found only in damp habitats usually with dense vegetation up to 1 m above ground level (Menkhorst 1995). The species has been recorded in Victoria in a range of areas from Wet Coastal Heathland at sea level to as high as 1800 m in Alpine Heath (Fig. 1).

The large patch of Coastal Heathland at Cape Liptrap Coastal Park contains a number of steep, wet gullies, with thick, almost impenetrable vegetation. Dusky Antechinus was captured in the head of one of these wet gullies. The capture site, which was 140 m above sea level, was dominated by a large thicket of Scrambling Coral-Fern *Gleichenia microphylla*, up to 2.5 metres high. This fern species often forms tan-

gled masses in coastal gullies (Wakefield 1975). The survey site was also subjected to a partial ecological burn in 1999. Two specimens were captured in Elliott traps at this site, both females weighing 43 g and 58 g (see back cover). A number of mammal trapping surveys have been conducted in the Cape Liptrap area over several decades (Braithwaite *et al.* 1978; Norris *et al.* 1979; Morton *et al.* 1980; Braithwaite 1982; Field Naturalists Club of Victoria unpubl.data; Mammal Survey Group of Victoria unpubl.data). It is, however, unclear whether any of the previous surveys included trapping sites in habitat similar to that which produced Dusky Antechinus records during the current survey. Previous surveys have recorded three dasyurid marsupials: Agile Antechinus, Swamp

**Fig. 1.** Distribution map of Dusky Antechinus in Victoria.

Antechinus and White-footed Dunnart; however, no records are available for Dusky Antechinus (Victorian Biodiversity Atlas).

Few sites exist along the South Gippsland coast with the vegetation structure and topography that provide the habitat for Dusky Antechinus. The Wonthaggi Heathlands Nature Conservation Reserve (WHNCR), which is situated approximately 40 km north-west of Cape Liptrap, contains large areas of high quality Coastal Heathland in a generally flat landscape, but does not contain habitats with dense, wet vegetation, especially in gullies. Numerous surveys of vertebrate fauna have been conducted in the WHNCR and adjacent coastal reserve since 1993 (Heislars 1993; Homan 1999; Homan 2003; Homan 2007; Homan 2008b; RMIT University unpubl.data). Each survey confirmed the presence of two species of dasyurid marsupial: Swamp Antechinus and White-footed Dunnart. Further west the next available records for Dusky Antechinus are from the Mornington Peninsula (Victorian Biodiversity Atlas).

Numerous records exist for the Dusky Antechinus from Wilsons Promontory National Park to the east of Cape Liptrap, in wet heath and wet forest (Victorian Biodiversity Atlas). Further east, the next available coastal records are from near Lake Tyers in East Gippsland, approximately 210 km north-east of Cape Liptrap (Victorian Biodiversity Atlas). The capture of Dusky Antechinus in the Cape Liptrap Coastal Park was unexpected, especially considering the number of previous surveys, and shows the importance of ongoing field studies of Victoria's native mammals. This is especially so as climate change alters vegetation structure and development and human population growth causes further fragmentation of wildlife habitat.

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